

**IN THE SPECIFICATION:**

Please amend the specification as follows:

Paragraph [0005] beginning on page 2, at prenumbered line 6, has been amended as follows:

[0005] Figure 2 represents a schematic drawing of the diffuser disclosed in the US Patent No. 6,327,083. As seen in Fig. 1, the diffuser 40 is made up of a front lenticular lens array 40a having unique microstructure design, a bulk region 48, and a clear region 49. The lenticular lens array 40a is composed of a plurality of concave elements 42 and convex elements 44 aligned orderly, wherein the concave element 42 is filled with light diffusing particles 46. Closed examination at the structure of ~~concave~~ convex element reveals a depression of concave shape 441 and a wavy contour of varying flatness. The drawback of aforementioned invention is that the lenticules array 40a designed as such would require fabrication technologies involving semiconductor manufacturing and various sophisticated mechanical processing techniques, thus resulting in poor manufacturability and high manufacturing cost. Furthermore, despite having the advantage of being able to reduce the speckle patterns, as is claimed in this prior art, the aforementioned diffusion means is incapable of emitting light with superior brightness and good wide-angle uniformity.

Paragraph [0025] beginning on page 5, at prenumbered line 17, has been amended as follows:

[0025] Figure 4 shows a concave diffusing piece according to the present invention. The concave diffusing piece 20 comprises a substrate 21, a ridge-shaped layer 22 and a diffusion layer 23. The substrate 21, ridge-shaped layer 22 and diffusion layer 23 all are transparent. As seen in Fig. 4, the substrate 21 is sandwiched in between the ridge-shaped layer 22 and the diffusion layer 23. The ridge-shaped layer 22 has a plurality of concave ridges 221 arranged thereon.

Between every two concave ridge, there has a ridgeline 2211. With an inter-ridge distance being defined as the distance between the ridgelines 2211 of the two adjacent concave ridges, and a ridge height being defined as the difference of altitude between the ridgeline and ~~the line separating the large ridge and the small ridge, the bottom line (or the center line or the valley), of the concave ridge,~~ the inter-ridge distances are equal to each other and the ridge heights are equal to each other. Each concave ridge along with its ridgeline have an extension line parallel to the X'-axis, where the X'-axis and aforementioned X-axis makes an included angle of 45°. The diffusion layer 23 is composed with the thin transparent layer 231 and the light-diffusing particles 232 uniformly dispersed within the transparent layer 231. The transparent layer 231 has a rugged surface, and the sizes of the diffusion particles 232 may range from several tens of nanometers to several units of micrometers. The light diffusing particles 232 may have the shapes that include but not limited to spheres, ovals, cylinders or other polyhedrons. In order to reduce the amount of light absorbed during diffusion, the chemical composition of the light diffusion particles 232 may include those materials having zero extinction coefficient zero, such as  $\text{TiO}_2$ ,  $\text{SiO}_2$ ,  $\text{BaSO}_4$ ,  $\text{MgO}_2$  or  $\text{ZnS}$ .

Paragraph [0028] beginning on page 6, at prenumbered line 32, has been amended as follows:

[0028] Another embodiment of the present invention is shown in Figures 6 and 6A, wherein two convex light diffusing pieces 10 and 10a are paired up to form another high brightness diffuser. The two convex diffusing pieces 10 and 10a are joined together with one piece laid intimately over the top of the other. The convex light diffusing pieces 10 and 10a are configured such that the rugged surface of the diffusion layer 13 of the convex light diffusing piece 10 located at the upper deck faces upward and the ridges associated with the ridge-shaped layer 12 faces downward. The inter-ridge distance of the two adjacent large ridges 121 is 60 nanometers and its ridge's height is 25 nanometers, whereas the inter-ridge distance of two adjacent small ridges 122 is 60 nanometers and its ridge's height is 10

nanometers. Moreover, both the large ridges 121 and the small ridges 122 extend longitudinally in the X-axis direction. The substrate ~~44a~~ 11 is 100 nanometers thick. The rugged surface associated with the diffusion layer 13a of the convex light diffusing piece 10a located at the lower deck faces upward, whereas the ridges associated with the ridge-shaped layer 12a faces downward. The inter-ridge distance is 60 nanometers and the ridge's height is 20 nanometers. The substrate 11a is 100 nanometers thick. The present embodiment has the characteristics that the large ridges 121a of the lowest layer of this light diffusing piece 10a and their associated longitudinal extension lines are parallel to the X' direction, where X'-axis and X-axis makes an included angle of 8.5°.

Paragraph [0030] beginning on page 7, at prenumbered line 26, has been amended as follows:

[0030] Figure 7 shows another convex diffusing piece according to the present invention. The convex diffusing piece ~~40bb~~ 10b comprises a substrate ~~44~~, 11b, a ridge-shaped layer 12 b and a diffusion layer 13b. The substrate 11b, ridge-shaped layer 12b and diffusion layer 13b all are transparent. As seen in Fig. 7, the diffusion layer 13b is sandwiched in between the substrate 11 and the ridge-shaped layer 12b. The ridge-shaped layer 12b has a plurality of large convex ridges 121b and small convex ridges arranged thereon where the large convex ridges 121b is disposed immediately next to its smaller counterpart 122b, and all of these ridges are parallel to the X-axis as shown in Figure 7. The large convex ridges 121b has a ridgeline 1211b associated with it. With an inter-ridge distance being defined as the distance between the ridgelines of the two adjacent large ridges, and a ridge height being defined as the difference of altitude between the ridgeline and the line separating the large ridge and the small ridge, the inter-ridge distances are equal to each other and the ridge heights are equal to each other. In addition, the small convex ridges 122b has a ridgeline 1221b associated with it. With an inter-ridge distance being defined as the distance between the ridgelines of the two adjacent small ridges, and a ridge height being defined as the difference of altitude between

the ridgeline and the line separating the large ridge and the small ridge, the inter-ridge distances are equal to each other and the ridge heights are equal to each other. The diffusion layer 13b is made up with a transparent thin layer 131b and numerous light-diffusing particles 132b, which are uniformly dispersed within the transparent layer 131b. One side of said transparent layer has a rugged surface, and the sizes of the diffusion particles 132b may range from several tens of nanometers to several units of micrometers. The light-diffusing particles 132b may have shapes that include but not limited to sphere, oval, cylinder or other polyhedrons. In order to reduce the amount of light absorbed during diffusion, the chemical composition of the light diffusion particles 132b may include those materials having zero extinction coefficient substantially equal to zero, such as  $\text{TiO}_2$ ,  $\text{SiO}_2$ ,  $\text{BaSO}_4$ ,  $\text{MgO}_2$  or  $\text{ZnS}$ .

Paragraph beginning on page 8, at prenumbered line 15, has been amended as follows:

[0031] Figure 8 shows a concave diffusing piece according to the present invention. The concave diffusing piece 20b comprises a substrate 21b, a ridge-shaped layer 22b and a diffusion layer 23b. The substrate 21b, ridge-shaped layer 22b and diffusion layer 23b all are transparent. As seen in Fig. 8, the diffusion layer 23b is sandwiched in between the substrate 21b and the ridge-shaped layer ~~22b~~. 22b. The ridge-shaped layer 22b has a plurality of concave ridges 221b arranged thereon. Between every two concave ridge, there has a ridgeline 2211b. With an inter-ridge distance being defined as the distance between the ridgelines 2211b of the two adjacent concave ridges, and a ridge height being defined as the difference of altitude between the ridgeline and ~~the line separating the large ridge and the small ridge~~, the bottom line (or the center line or the valley) of the concave ridge, the inter-ridge distances are equal to each other and the ridge heights are equal to each other. Each concave ridge along with its ridgeline have an extension line parallel to the X'-axis, where the X'-axis and aforementioned X-axis makes an included angle

of 45°. The diffusion layer 23b is composed with the thin transparent layer 231b and the light-diffusing particles 232b uniformly dispersed within the transparent layer 231b. The transparent layer 231b has a rugged surface, and the sizes of the diffusion particles 232b may range from several tens of nanometers to several units of micrometers. The light diffusing particles 232b may have the shapes that include but not limited to spheres, ovals, cylinders or other polyhedrons. In order to reduce the amount of light absorbed during diffusion, the chemical composition of the light diffusion particles 232b may include those materials having zero extinction coefficient zero, such as  $\text{TiO}_2$ ,  $\text{SiO}_2$ ,  $\text{BaSO}_4$ ,  $\text{MgO}_2$  or  $\text{ZnS}$ .

Paragraph [0034] beginning on page 10, at prenumbered line 5, has been amended as follows:

[0034] Another embodiment of the present invention is shown in Figures 10 and 10A, wherein two convex light diffusing pieces 10b and 10c are paired up to form another high brightness diffuser. The two convex diffusing pieces ~~40e~~ 10b and 10c are joined together with one piece laid intimately over the top of the other. The convex light diffusing pieces 10b and 10c are configured such that the rugged surface of the diffusion layer 13b of the convex light diffusing piece 10b located at the upper deck faces upward and the ridges associated with the ridge-shaped layer 12b faces downward. The inter-ridge distance of the two adjacent large ridges 121b is 60 nanometers and its ridge's height is 25 nanometers, whereas the inter-ridge distance of two adjacent small ridges 122b is 60 nanometers and its ridge's height is 10 nanometers. Moreover, both the large ridges 121b and the small ridges 122b extend longitudinally in the X-axis direction. The substrate 11b is 100 nanometers thick. The rugged surface associated with the diffusion layer 13c of the convex light diffusing piece 10c located at the lower deck faces upward, whereas the ridges associated with the ridge-shaped layer 12c faces downward. The inter-ridge distance is 60 nanometers and the ridge's height is 20 nanometers. The substrate 11c is 100 nanometers thick. The present embodiment has the characteristics that the large ridges 121c of the lowest layer of ths light diffusing piece 10c and their

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associated longitudinal extension lines are parallel to the X' direction, where X'-axis and X-axis makes an included angle of  $8.5^\circ$ .